

REMARKS

Status Summary

Claims 1-20, 22, and 23 are pending in the present application. In this amendment, no claims are added, and no claims are canceled. Therefore, upon entry of this amendment, claims 1-20, 22, and 23 will remain pending.

Objections

The specification is objected to because the Examiner believes that the terms "active" and "passive" used throughout the specification refer to "positive" and "negative" used in the claims. (See page 2 of the Official Action.) The Examiner therefore suggests changing "active" to "positive" and "passive" to "negative" throughout. Applicants respectfully disagree with the Examiner's understanding of these terms and decline the Examiner's suggested amendment.

According to the specification, and as would be understood by one of ordinary skill in the art, a gateway operating in "passive" mode is capable of relaying codec bypass negotiation messages from one leg to another leg of a call that it serves, but does not terminate the negotiation. In contrast, a gateway operating in "active" mode is capable of terminating codec bypass negotiation messages on at least one leg of a call that it serves. (See page 8, lines 15-25 of the present specification.) Therefore, the difference between "active" and "passive" modes is whether or not the gateway terminates codec bypass negotiation. By contrast, the claims recite that "responsive to the assessment of compatibility being positive,..." and "responsive to the assessment of compatibility being negative,...." (See, for example, claim 1.) It is respectfully submitted that the plain meaning of the terms "positive" and "negative" in this context refer to the affirmative (yes) and the negative (no) responses of the determination recited in the previous step. Specifically, the phrase "responsive to the assessment of compatibility being positive,..." is equivalent in meaning to the phrase "in response to the assessment indicating that the codec information regarding the originating entity and the codec information regarding said communication apparatus are compatible,..." Similarly, the phrase "responsive to the assessment of compatibility being negative,..." is equivalent in meaning to the phrase "in response to

the assessment indicating that the codec information regarding the originating entity and the codec information regarding said communication apparatus are not compatible,...” Thus, the terms active/passive and positive/negative have distinct meanings and are used consistently with these meanings throughout the specification and the claims. Accordingly, it is respectfully submitted that the objection to the specification should be withdrawn.

Claim Rejection – 35 U.S.C. § 101

Claim 17 is rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter. The Examiner contends that claim 17 is directed to a signal per se because the specification indicates that media includes a signal. (See page 2 of the Official Action.) Applicants respectfully disagree. The specification states that program instructions could be stored either “on a medium which is fixed, tangible and readable directly by the processor” or “stored remotely.” (See page 20, lines 11-14 of the present specification.) The specification continues that the program instructions may be transmittable over a transmission medium, which may be either wired or wireless. (See page 20, lines 14-18 of the present specification.) It is submitted that the passage cited by the Examiner simply states the well-known fact that electronic computer programs (i.e., non-punch cards) can be transmitted using various types of transmission mediums. Nothing about this fact changes the meaning of the fixed and tangible medium on which the program instructions are stored.

Nevertheless, claim 17 has been amended to recite a non-transitory computer-readable media. Accordingly, it is respectfully submitted that the rejection of claim 17 should be withdrawn.

Claim Rejection – 35 U.S.C. § 103

§ 103 – Claims 1-20, 22, and 23

Claims 1-17 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,324,409 to Shaffer et al., (hereinafter, “Shaffer”) in view of U.S. Patent No. 7,240,000 to Harada, (hereinafter, “Harada”). This rejection is respectfully traversed.

Independent claim 1 recites a communication apparatus that includes a first interface for exchanging data with a first neighboring entity and a second interface for exchanging data with a second neighboring entity. The communication apparatus further includes a memory for storing codec information regarding said communication apparatus and a control entity operative to detect a first message from the first neighboring entity via the first interface, the first message being indicative of codec information regarding an originating entity. In response to detection of the first message, the control entity performs an assessment of compatibility between the codec information regarding the originating entity and the codec information regarding said communication apparatus. In response to the assessment of compatibility being positive, the control entity self-identifies the communication apparatus as a candidate for terminally supporting a, subsequent codec-bypass negotiation with the originating entity. In response to the assessment of compatibility being negative, the control entity self-identifies the communication apparatus as a candidate for non-terminally supporting a subsequent codec-bypass negotiation with the originating entity.

Independent claim 1 has been amended herein to recite that the control entity detects the first message indicative of codec information regarding the originating entity after a call is established. Support for this amendment can be found, for example, on page 8, lines 31-33 of the present specification.

Independent claim 16 recites a method of establishing candidacy of a gateway as terminally or non-terminally supporting a codec-bypass negotiation with an originating entity in a communications network. The method includes detecting a first message received from a first neighboring entity, the first message being indicative of codec information regarding the originating entity. Compatibility is assessed between the codec information regarding the originating entity and the codec information regarding the gateway. In response to the assessment of compatibility being positive, the gateway is self-identified as a candidate for terminally supporting a subsequent codec-bypass negotiation with the originating entity. In response to the assessment of compatibility being negative, the gateway is self-identified as a candidate for non-terminally supporting a subsequent codec-bypass negotiation with

the originating entity. Independent claim 17 recites a computer readable medium for performing the method of claim 16.

Independent claims 16 and 17 have been amended herein to recite that the steps of detecting a first message indicative of codec information regarding the originating entity, assessing codec compatibility, and self-identifying as either terminally (i.e., active) or non-terminally (i.e., passive) supporting a subsequent codec-bypass negotiation are performed after a call is established. Support for this amendment can be found, for example, on page 8, lines 31-33 of the present specification.

The Examiner concedes that Shaffer fails to disclose that the control entity self-identifies the communication apparatus as a candidate for terminally supporting a subsequent codec-bypass negotiation with the originating entity in response to the assessment of compatibility being positive and that the control entity self-identifies the communication apparatus as a candidate for non-terminally supporting a subsequent codec-bypass negotiation with the originating entity in response to the assessment of compatibility being negative. (See page 5 of the Official Action.) Applicants respectfully agree. However, the Examiner contends that Harada teaches this feature. (See page 5 of the Official Action.) Applicants respectfully disagree.

Regarding Shaffer, the Examiner contends that Shaffer teaches collecting codec information regarding an originating node and one or more intermediate nodes. (See pages 4-5 of the Official Action.) According to Shaffer, a sender sends a signaling message to a receiver, which is intercepted by an intermediate signaling node (e.g., gateway). Each node between the sender and the receiver capable of transcoding appends a listing of its capabilities to the signaling message and forwards the signaling message to the next node. Once all of the nodes in the path have done so, the signaling message is sent back to the sender and the sender determines an optimized series of codings to be used for the call. The sender enforces this optimized path by sending additional signaling messages back to nodes in the path instructing them how the call should be coded. (See Abstract of Shaffer.)

However, the determination of the optimized series of codings to be used for a call in Shaffer is performed before the call is established. For example, Shaffer states:

The signaling message is sent to the receiver prior to sending an actual message. (See Abstract of Shaffer.) (Emphasis Added.)

The signaling message may then be sent back to the sender for the sender to determine an optimized series of voice codings to be used for the call. (See col. 2, lines 34-37 of Shaffer.) (Emphasis Added.)

After the end-to-end coding scheme is determined, another signaling message is sent which instructs the intermediary stations to follow the end-to-end coding scheme (step **410**). (See col. 7, lines 38-42 of Shaffer.) (Emphasis Added.)

According to the above-quoted passages in Shaffer, the determination of the optimized series of codings to be used for a call in Shaffer is performed before the call is established. In other words, Shaffer does not monitor the bearer path for a call once the call has been established for messages indicative of codec information regarding the originating entity because the entire process of Shaffer is carried out before a bearer path for the call has been established.

In contrast to Shaffer, independent claims 1, 15, and 16 recite that the steps of detecting a first message indicative of codec information regarding the originating entity, assessing codec compatibility, and self-identifying as either terminally (i.e., active) or non-terminally (i.e., passive) supporting a subsequent codec-bypass negotiation are performed after a call is established. For example, once a call is established between two endpoints, the endpoint gateways attempt to establish a codec-bypass connection. This attempt is made through the exchange of codec-bypass negotiation messages during a code-bypass negotiation. If the two endpoint gateways are associated with a common codec, then an end-to-end codec-bypass connection can be established. (See page 7, lines 3-33 of the present specification.) Additionally, all codec-bypass compliant gateways may monitor the bearer path for a call once the call has been to detect codec-bypass negotiation messages in order to determine whether one or more portions of the path may be codec-bypassed. (See page 8, lines 31-33 of the present specification.) Detecting a first message indicative of codec information regarding the originating entity, assessing codec compatibility,

and self-identifying as either terminally (i.e., active) or non-terminally (i.e., passive) supporting a subsequent codec-bypass negotiation are performed after a call is established is different from determining an optimized series of codings to be used for a call before the call is established because the former allows arbitrary combinations of gateways to collaborate constructively to improve performance by removing – to the extent possible – tandem codecs without delaying establishment of a call while the latter does not.

Harada fails to overcome the significant shortcomings of Shaffer. The Examiner cites Harada as disclosing determining if the same coding type is used and, if so, then the mobile switching center switches from tandem communication to bypass communication. (See page 5 of the Official Action and col. 7, lines 22-24 of Harada.) Yet, similar to Shaffer, this process is not performed after a call is established. For example, Harada states:

As shown in FIG. 9, when mobile terminal **101** starts to establish a call, mobile terminal **101** sends a codec type list of its own to mobile terminal **110** on a termination side in step **21**. Then, mobile terminal **110** collects a codec type list of its own in step **22**. Mobile terminal compares the code list type of mobile terminal **110** with the codec type list of its own in step **23**. (See col. 9, lines 17-24 of Harada.) (Emphasis Added.)

If there is no coding process contained in both the codec type lists, then the communications system establishes communication between mobile terminals **101**, **110** according to the tandem connection in step **25**. (See col. 9, lines 27-31 of Harada.) (Emphasis Added.)

According to the above-quoted passages in Harada, mobile terminals **101** and **110** collect codec information when a mobile terminal starts to establish a call. Starting to establish a call occurs before a call is established because, as Harada indicates, communications is established only after the codec list type determination is made. Therefore, neither Shaffer nor Harada teach detecting a first message indicative of codec information regarding the originating entity, assessing codec compatibility, and self-identifying as either terminally (i.e., active) or non-terminally (i.e., passive) supporting a subsequent codec-bypass negotiation are performed after a call is established, as claimed. Accordingly, it is respectfully submitted that the rejection of claims 1-17 as unpatentable over Shaffer in view of Harada should be withdrawn.

§ 103 – Claims 18-20

Claims 18-20 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,600,738 to Alperovich et al., (hereinafter, "Alperovich") in view of Harada. This rejection is respectfully traversed.

Independent claim 18 recites a method of establishing a codec-bypass connection between a first gateway and one of a plurality of in-path gateways located along a path from the first gateway to a second gateway. The method includes identifying a target in-path gateway from among the plurality of in-path gateways, the target in-path gateway being the in-path gateway furthest along the path from the first gateway which is characterized by codec-bypass connection compatibility with the first gateway. A codec-bypass connection is established between the first gateway and the target in-path gateway. Independent claim 18 has been amended herein to recite that the steps of identifying a target in-path gateway and establishing a codec-bypass connection are performed after a call is established. Support for this amendment can be found, for example, on page 8, lines 31-33 of the present specification.

As mentioned above, there is no disclosure in Harada of establishing a codec-bypass connection after a call is established, as claimed. Alperovich likewise fails to teach identifying a target in-path gateway and establishing a codec-bypass connection after a call is established. The Examiner concedes that Alperovich fails to disclose establishing a codec-bypass connection between the first gateway and the target in-path gateway. (See page 13 of the Official Action.) Therefore, it is submitted that Alperovich also necessarily fails to disclose when the codec-bypass connection is established (i.e., establishing a codec-bypass connection after a call is established). Accordingly, it is respectfully submitted that the rejection of claims 18-20 as unpatentable over Alperovich in view of Harada should be withdrawn.

§ 103 – Claims 22 and 23

Claims 22 and 23 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Alperovich in view of Harada, and in view of Shaffer. This rejection is respectfully traversed.

Independent claim 22 recites a method of establishing a codec-bypass connection along a path between a first gateway and a second gateway, the path comprising a plurality of in-path gateways. The method includes identifying a first sub-path between the first gateway and a first target in-path gateway from among the plurality of in-path gateways, the first target in-path gateway being the in-path gateway furthest along the path from the first gateway which is characterized by codec-bypass connection compatibility with the first gateway. A second sub-path is identified between the second gateway and a second target in-path gateway from among the plurality of in-path gateways, the second target in-path gateway being the in-path gateway furthest along the path from the second gateway which is characterized by codec-bypass connection compatibility with the second gateway. The lengths of the first and second sub-paths are determined. If the first sub-path is longer than the second sub-path, a codec-bypass connection is established between the first gateway and the first target gateway. If the second sub-path is longer than the first sub-path, a codec-bypass connection is established between the second gateway and the second target gateway. Independent claim 22 has been amended to recite that establishing a codec-bypass connection along a path between a first gateway and a second gateway, the path comprising a plurality of in-path gateways is performed after a call is established. Support for this amendment can be found, for example, on page 8, lines 31-33 of the present specification.

As mentioned above, there is no disclosure in Shaffer, Harada, or Alperovich of establishing a codec-bypass connection along a path between a first gateway and a second gateway, the path comprising a plurality of in-path gateways is performed after a call is established, as claimed. Accordingly, for the same reasons as set forth above, it is respectfully submitted that the rejection of claims 22 and 23 as unpatentable over Alperovich in view of Harada and Shaffer should be withdrawn.

CONCLUSION

In light of the above amendments and remarks, it is respectfully submitted that the present application is now in condition for allowance, and an early notice to such effect is earnestly solicited.

If any small matter should remain outstanding after the Patent Examiner has had an opportunity to review the above Remarks, the Patent Examiner is respectfully requested to telephone the undersigned patent attorney in order to resolve these matters and avoid the issuance of another Official Action.


DEPOSIT ACCOUNT

The Commissioner is hereby authorized to charge any fees associated with the filing of this correspondence to Deposit Account No. **50-0426**.

Respectfully submitted,
JENKINS, WILSON, TAYLOR & HUNT, P.A.

Date: December 3, 2010

By: _____



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